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Comparison of the Xpert® GBS to the Granada mediumfor rapid intrapartum detection of GBS colonization

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Background: Group B streptococcus (GBS) is a common cause of early-onset neonatal sepsis in both developed and developing countries. Neonatal Early-Onset Disease (0–6 days of life) is acquired from mothers with vaginal/rectal colonization with GBS. Laboratory detection of GBS colonization status in pregnant women is therefore important for the selective prescription of antibiotic for the prevention of complications arising from Group B Streptococcus infection.

Culture based screening has its limitations including poor turn -around time, and patients lost to follow up. The GeneXpert GBS®(Cepheid) is a rapid screening test that can be performed intrapartum. Such a test should compare favourably to culture based screening methods.

Methods & Materials: A total of 85 pregnant women who were between 27 and 37 weeks gestation were enrolled from a single large maternity clinic in our region. Three swabs were collected from each participant: 1 vaginal, 1 rectal and 1 vagino-rectal (Copan™). Each of the swabs was plated on Granada medium. The presence of typical orange colonies on the Granada medium were confirmed by Streptex® agglutination. The vagino-rectal swab was also used for the GeneXpert GBS assay which was performed according to the manufacturer's instructions.

Results: Twenty-five (29%) women were colonized by GBS by the Granada medium. Xpert GBS detected 23/85 (27%) positives. The Xpert GBS missed two specimens that were positive by culture and identified one additional positive, with a sensitivity of 87.5% and specificity of 98.4%. The PPV was 95.5% and NPV 95.2%.

Conclusion: Xpert GBS had excellent performance compared to culture. Our study is the first in South Africa to evaluate the performance of Xpert GBS compared to the Granada medium for the rapid screening of pregnant women for GBS colonization. This real-time PCR assay is a potentially accurate test to identify GBS carriers at point of care. The Xpert GBS could enhance the identification of candidates for intrapartum antibiotic treatment, including women with preterm rupture of membranes or preterm labour.

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Acute abdomen in a patient with infective endocarditis: A case of a mycotic aneurysm of the celiac trunk

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Background: The prevalence of infective endocarditis worldwide is decreasing but is still a burden in developing countries such as the Philippines. Among its complications are embolic strokes, or rare septic emboli to extracranial vessels. Mycotic aneurysm of the celiac trunk resulting from infective endocarditis is rare, accounting for only 4% of all splanchnic artery aneurysms. These aneurysms are important to recognize because mortality rate after rupture is between 25% and 70%.

Methods & Materials: We report a case of a 29 year-old male diagnosed with Enterococcus bacterial endocarditis of the anteroseptal leaflet of the mitral valve, initially presenting with persistent low-grade fever of 4 weeks and transient ischemic attacks. Echocardiography and serial blood cultures showed a subcentimeter oscillating mass and growth of the Enterococcus faecalis clinched the above diagnosis. He was given culture guided antibiotic regimen of Ampicillin and Gentamicin.

However, on his 14th hospital day, he presented with epigastric pain, burning in character and was initially managed with proton-pump inhibitors which offered partial relief of symptoms. After three days of intermittent epigastric pain, he developed hematemesis and sudden severe abdominal pain with VAS of 10/10. On physical examination, he showed signs of signs of acute abdomen with generalized guarding and direct tenderness. Signs of hypovolemic shock ensued with associated drop in hemoglobin from 120 mg/dL to 63 mg/dL. Blood products were transfused and an emergent exploratory laparotomy was carried out for an initial impression of acute mesenteric ischemia versus perforated peptic ulcer disease.

Results: However, intraoperatively, a 4x4 cm aneurysm of the celiac trunk was instead found. This was partially concealed by a portion of the pancreas. Transection of the pancreatic tail and ligation of the pancreatic duct was done to carefully expose the aneurysm, then, an aneurysectomy with greater saphenous graft interposition was performed. He developed post-operative pancreatitis but was eventually discharged improved and well.

Conclusion: This is a rare case of a ruptured celiac trunk aneurysm arising from septic emboli secondary to infective endocarditis, presenting with acute abdomen. This case highlights the importance of considering splanchnic aneurysms in patients with infective endocarditis presenting with vague abdominal pain, as early diagnosis and prompt treatment is life-saving.

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